CLAIMS

It has been suggested that arcurate and circular arrays of camera devices be arranged horizontally about a subject of interest, with optical axes of said camera devices convergent upon a scene, which cameras each record a different horizontally displaced image of the subject, which displacement is employed to present sequences of stero-optical image pairs to the viewer, which pairs are presented by complex means, such as specially built motion picture projectors, specially built and complex screens or other specially built and complex reflective or transmissive display devices, using specially built and complex obturating devices to separate and display left images to viewers' left eyes, and right images to viewers' right eyes. These effects seem to be limited to the display of traditional motion picture effects, in 3D illusion, or the traditional display of still 3D images.

I Claim:

1. A method whereby a plurality of cameras, motion or still, electronic or film, are placed in array; which cameras, due to position in array and to camera aim, focus, and focal length adjustment and timing and duration of exposure, capture controlled, incrementally different photographic records of a subject; which records made by adjacent cameras differ in view of the subject area by a controllable amount; which records are combined in sequences such as but not limited to, record 1 çamera 1, record 1 camera 2, etc., onto a display medium such as but not limited to motion picture film, video tape, magnetic or optical storage disk, or RAM memory; which display medium can be read and displayed by common, unmodified motion picture projectors, or video display systems to produce different, 2D novel visual motion picture type effects; which effects can but need not simulate the effect obtained by traditionally projecting the motion picture film produced by a traditional motion picture camera which was sequentially placed into the positions and orientations of the array cameras, making one photographic record of the subject at each sequential array camera position; which arrays can be of variable shape and orientation to capture novel series of different angular records of a subject area so that on display the records obtained produce not only rotational effects about subjects such as a real diver, hanging motionless in space as he enters the water, with water droplets frozen in mid-air, but also novel tracking effects using novel curvilinear or linear arrays of cameras, stringing these records together to form new visual motion picture effects such as would be possible if one

could move through a room, where time stood still, where butterflies hung motionless in space, and where can now, employing these methods, visually simulate movement through space/time where time has stopped.

2. The methods, which provide powerful, new visual and/or aural perceptions of the world by employing arrays of receiver devices, such as, but not limited to, camera devices, or microphones, or arrays which combine receiver types, to capture different angular records of energy emanating from a subject of interest; which arrays are of many and variable shape, e.g. circular, arcurate, linear, curvilinear, dome-like, or many other shapes; which arrays are comprised of members that can be individually manipulated, positioned, aimed, and operated, before and during energy capture, by hand, or by remote control, in synchrony or non-synchrony; which different angular recordings made by the many array members are captured in various controlled sequences with array members "focal" characteristics, optical, aural or other character-istics such as but not limited to capture timing and duration, controlled and variable accoring to the desired display effect, which records are manipulated by hand, or by computer ROC target method to form properly registered sequences of records made by adjacent array members; which sequences can vary, but usually consist of record(s) 1 array member(s) 1, record(s) 1 array member(s) 2, etc, which sequences from one or more array types are presented singly or in combination by traditional motion picture or video method, to produce novel visual effects and/or aural effects.

3. I believe I need some help in claiming the invented methods described in the previous specification. It seems to me that a proper claim or claims could be con-structed from part or parts of the following:

3. "1." above combined with:
     a. variable timing and duration of array member collection to enable the pro-duction of these effects;
     b. the variable sequence of array member records to produce different, useful effects; the variable timing of sequence display;

     c. the use of ROC target method to control array shape, array member orienta-tion and operation; the use of ROC target method to manipulate images, either manu-ally or through computer means ,to alleviate registration problems, and/or to create

new effects (such as changing the axis of rotation of a series of array images); the use of ROC target method to enable the previous operations to be done rapidly and accurately through computer control thus facilitating instant replay effects;

    d. the method which employs automatic assignment of morph points enabling instant replay interpolation between 2 or more angular records captured by 2 more more array members; the use of this automatic morph point assignment method to assign a multitude of morph points allowing more accurate interpolation (Many, or even all image pixels are assigned individual and accurate spatial locations.); and the method of assigning morph points by projecting a multiplicity of computer differentiable points of light onto the subject surfaces, from a variety of angles, to cover the entire array visible surface of the subject, computer matching point locations as they appear from 2 or more array camera locations to create morph points on these 2 or more images, and combining these morph point data with visual data of the subject collected by the same array members; the method of assigning morph points by combining array subject measurement data with visual data collected by the same array; the method of remote subject measurement by projected light, visibly or invisibly (or by radar or sonar) so as not to interfere with an athletic event; combining these methods in real-time, on an ongoing basis to facilitate instant replay;

    e. the use of other types of receiver arrays, shaped and operated according to the above methods, separately or in combination with one another or with camera arrays to produce new types of effects;

    f. the method which employs transparent camera devices, singly, or in array, rather than interpolation (morphing) to fill in the gaps of an array, or to form tracking effects without the need for succeeding cameras to vacate the preceding cameras' angles of view as in series E, Figure 2.

g. "a. and b."

h. "a. b. and c."

i. "a. b. c. and d."

j. "a., b., c., d. and e."

k. "a., b., c., d., e., and f."